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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/729,115 | 12/05/2003 | Andrew J. Spry | 03-1901 | 3158 |

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| EXAMINER |
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LOUIE, OSCAR A

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| ART UNIT | PAPER NUMBER |
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2109

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/729,115 | Applicant(s) SPRY ET AL. | |
| | Examiner Oscar A. Louie | Art Unit 2112 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This first non-final action is in response to the original filing of 12/05/2003. Claims 1-24 are pending and have been considered as follows.

Examiner's Note

1. The Applicant appears to be attempting to invoke 35 U.S.C. 112 6th paragraph in Claims 5-8, 17, & 20 by using "means-plus-function" language. However, the Examiner notes that the only "means" for performing these cited functions in the specification appears to be computer program modules. While the claims pass the first test of the three-prong test used to determine invocation of paragraph 6, since no other specific structural limitations are disclosed in the specification, the claims do not meet the other tests of the three-prong test. Therefore, 35 U.S.C. 112 6th paragraph has not been invoked when considering these claims below.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Hetzler (US-7134139-B2).

Claims 1, 5, & 9:

Hetzler discloses a method, an apparatus, and a program for prohibiting iSCSI discovery sessions comprising,

- “Once the above-described process has resulted in issued tickets, the logic of FIG. 3 can be invoked to access data. Commencing at block 54, a login request is received from a requesting client. The request includes a valid client ticket.sub.1 along with (B, LU . . .). At decision diamond 56 it is determined by the cache device 12 whether (B, LU, ticket.sub.1) are all valid, and if not, the logic ends at state 58. Otherwise, the logic proceeds to block 60” (i.e. “receiving an iSCSI login request; determining whether a payload of said iSCSI login request contains a "SessionType =Discovery" key/value pair”) [column 5 lines 26-33].
- “Commencing at block 34, a LAN client requests an authentication ticket, denoted client ticket.sub.1, by sending a ticket request to the cache device 12. The ticket request includes a request to access (B, LU . . .), wherein "B" represents the relevant bus (e.g., an iSCSI bus) and the "LU"s represent logical units in the data storage 14 that can be associated with the requesting client or with the sought-after blocks. At decision diamond 36 the device 12 determines whether authentication failed, i.e., whether the LAN client is not authorized access to the cache data storage 14. If authentication fails, the ticket request is denied and the process ends at block 38” (i.e. “when discovery sessions are

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disabled and said iSCSI login request contains said "SessionType=Discovery" key/value pair, rejecting said iSCSI login request") [column 4 lines 59-67 & column 5 lines 1-3].

Claims 2, 6, & 10:

Hetzler discloses a method as in Claim 1 above, an apparatus as in Claim 5 above, and a program as in Claim 9 above for prohibiting iSCSI discovery sessions further comprising,

- "Otherwise, the cache device 12 must obtain a current cache authentication ticket, denoted ticket.sub.2, and in that case the logic would flow to block 44, wherein the cache device 12 requests the cache ticket.sub.2 from the WAN server holding the requested data. If authentication at the WAN server fails as determined at decision diamond 46, the logic flows to block 48 to return "fail" and deny access. If this happens, the cache device 12 informs the LAN client. If authentication is successful, however, the logic flows from decision diamond 46 to block 50, wherein the WAN server grants the cache ticket.sub.2 to the cache device 12. Then, the cache device 12 issues a corresponding client ticket.sub.1 to the requesting client at block 52. The client ticket.sub.1 can be stored in the local storage 14 if desired" (i.e. "iSCSI login request is rejected with a iSCSI status-class of "Target Error" and status detail of "Session Type not Supported") [column 5 lines 12-25].

Claims 3, 7, & 11:

Hetzler discloses a method as in Claim 1 above, an apparatus as in Claim 5 above, and a program as in Claim 9 above for prohibiting iSCSI discovery sessions further comprising,

- "The logic commencing at block 70 is then repeated as necessary for read/write requests. At block 70, a read or write request is received at the cache device 12 from a LAN client.

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The request includes (B, LU, block), wherein "block" is the specific data block or blocks sought to be read (or written)" (i.e. "declaring a session type on said iSCSI login request") [column 5 lines 47-52].

Claims 4, 8, & 12:

Hetzler discloses a method as in Claim 1 above, an apparatus as in Claim 5 above, and a program as in Claim 9 above for prohibiting iSCSI discovery sessions further comprising,

- "The logic commencing at block 70 is then repeated as necessary for read/write requests. At block 70, a read or write request is received at the cache device 12 from a LAN client. The request includes (B, LU, block), wherein "block" is the specific data block or blocks sought to be read (or written)" (i.e. "when a session type is not explicitly declared on said iSCSI login request, assuming a session type is not a discovery session and specifying a specific target") [column 5 lines 47-52].

Claims 13, 17, & 21:

Hetzler discloses a method, an apparatus, and a program for prohibiting iSCSI target stealth operation comprising,

- "If desired, additional functionality can be provided. For example, the cache device 12 can automatically discover new clients 28 and servers 22 on the network. Moreover, the cache device 12 can limit the number of write requests to a set of clients 28, either in data volume or rate of requests, to essentially establish a storage quota management system. Further, sets of administrative specifications can be changed by authenticated servers 22 and authenticated clients 28. If desired, storage blocks in the local storage 14 can be locked transparently to the clients 28 by the above-described mechanism of associating

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tickets with logical units, to facilitate sharing of the cache 12 among the clients 28. Still further, the tickets can have expirations, and a ticket that has expired or will soon expire can be automatically reapplied for based on an alert generated by the cache 12 or the granting server 22. In one non-limiting example, the network connections 20, 26 can use encryption. The data cache device 12 can, in accordance with cache principles known in the art, anticipate client requests based on historical requests and adapt accordingly, e.g., by appropriately placing related data close together in the storage 14, to thereby improve client performance” (i.e. “providing a setting to individually enable/disable at least one of discovery sessions, SLP, iSNS, ICMP, and SNMP; and when said discovery session, said SLP, and said iSNS are all disabled, providing a warning that an initiator must be statically configured to locate a target on an iSCSI entity”) [column 6 lines 16-38].

Claims 14, 18, & 22:

Hetzler discloses a method as in Claim 13 above, an apparatus as in Claim 17 above, and a program as in Claim 21 above for prohibiting iSCSI target stealth operation further comprising,

- “If desired, additional functionality can be provided. For example, the cache device 12 can automatically discover new clients 28 and servers 22 on the network. Moreover, the cache device 12 can limit the number of write requests to a set of clients 28, either in data volume or rate of requests, to essentially establish a storage quota management system. Further, sets of administrative specifications can be changed by authenticated servers 22 and authenticated clients 28. If desired, storage blocks in the local storage 14 can be locked transparently to the clients 28 by the above-described mechanism of associating tickets with logical units, to facilitate sharing of the cache 12 among the clients 28. Still

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further, the tickets can have expirations, and a ticket that has expired or will soon expire can be automatically reapplied for based on an alert generated by the cache 12 or the granting server 22. In one non-limiting example, the network connections 20, 26 can use encryption. The data cache device 12 can, in accordance with cache principles known in the art, anticipate client requests based on historical requests and adapt accordingly, e.g., by appropriately placing related data close together in the storage 14, to thereby improve client performance" (i.e. "enable/disable is distributed throughout a management application") [column 6 lines 16-38].

Claims 15, 19, & 23:

Hetzler discloses a method as in Claim 13 above, an apparatus as in Claim 17 above, and a program as in Claim 21 above for prohibiting iSCSI target stealth operation further comprising,

- "Otherwise, the cache device 12 must obtain a current cache authentication ticket, denoted ticket.sub.2, and in that case the logic would flow to block 44, wherein the cache device 12 requests the cache ticket.sub.2 from the WAN server holding the requested data. If authentication at the WAN server fails as determined at decision diamond 46, the logic flows to block 48 to return "fail" and deny access. If this happens, the cache device 12 informs the LAN client. If authentication is successful, however, the logic flows from decision diamond 46 to block 50, wherein the WAN server grants the cache ticket.sub.2 to the cache device 12. Then, the cache device 12 issues a corresponding client ticket.sub.1 to the requesting client at block 52. The client ticket.sub.1 can be stored in the local storage 14 if desired" (i.e. "warning is provided to an administrator") [column 5 lines 12-25].

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Claims 16, 20, & 24:

Hetzler discloses a method as in Claim 13 above, an apparatus as in Claim 17 above, and a program as in Claim 21 above for prohibiting iSCSI target stealth operation further comprising,

- “Otherwise, the cache device 12 must obtain a current cache authentication ticket, denoted ticket.sub.2, and in that case the logic would flow to block 44, wherein the cache device 12 requests the cache ticket.sub.2 from the WAN server holding the requested data. If authentication at the WAN server fails as determined at decision diamond 46, the logic flows to block 48 to return "fail" and deny access. If this happens, the cache device 12 informs the LAN client. If authentication is successful, however, the logic flows from decision diamond 46 to block 50, wherein the WAN server grants the cache ticket.sub.2 to the cache device 12. Then, the cache device 12 issues a corresponding client ticket.sub.1 to the requesting client at block 52. The client ticket.sub.1 can be stored in the local storage 14 if desired” (i.e. “when all discovery mechanisms are disabled, providing said warning to a user”) [column 5 lines 12-25].

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

a. Day (US-6052784-A)

b. Krueger (RFC 3347)

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Oscar Louie whose telephone number is 571-270-1684. The examiner can normally be reached Monday through Thursday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Myhre, can be reached at 571-270-1065. The fax phone number for Formal or Official faxes to Technology Center 2100 is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OAL
01/17/2007


James Myhre
Supervisory Patent Examiner